

NATVRALL  
PHILOSOPHY:  
OR  
A DESCRIPTION  
OF THE WORLD, AND OF  
the severall Creatures therein contained:

*Viz.*

Of Angels, of Mankinde, of the Heavens,  
the Starres, the Planets, the foure Elements, with  
their order, nature and government: As also of Mine-  
als, Metals, Plants, and Precious stones; with  
their colours, formes, and vertues.

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By DANIEL WIDDOVES.

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The second Edition, corrected and enlarged.

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1 King. 4.33. He spake of Trees, from the Cedar tree that is  
in Lebanon, even to the Ispes that springeth out of the wall: He spake  
also of Beasts, and of Fowles, and of creeping things, and of Fishes,

The selittle leaves the Worlds huge load sustaine,  
And what besides the great World can containe.

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Printed at London by Tho. Cotes, and are to be sold by Beniamine  
Allen, in Popes head Alley, over against the Horseshoe. 1631.

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## The Epistle Dedicatory.

those services that I have lately done in the survey of *Ireland*, you being Surveyor General of that kingdom, wherein I have spent the most part of thirty yeares, in the service of my Prince and Country, *Tam Marte, quam Mercurio*, both by Pike and Pen, with great toyle, much hazard, and many hurts; but little profit. Notwithstanding, your demerits and worth be such, as Gratitude hath chosen your Patronage: and Devotion wisheth all honour, health, and happiness to you, to my good Lady, and to yours,

*At your Honours Command,*

I. Wyddowes,

جیسون

## Woodhouse.

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## Naturall Philosophy.

### CHAP. I. What Philosophie is.



Philosophie is a knowledge of Naturall things: Things (her subject) either are He who alone is; from, by, and for whom all things are: or else such they be as are numbred by time, and measured by place, and subject unto motion. God is a Spirit, infinitely good and great. What God is, God is but one divine Eilence, consisting of three distinct Persons, the *Father*, the *Son*, and the *holy Ghost*. The actions of God are either, the Creating or Governing of the world. The World consisteth either of God two-fold, things invisible, as of Spirits: or Visible, as the heavens, the elements, and the bodyes composed of elements. The heaven of the blessed, *vide Gen. I, 1.* is counted the third heaven, the Orbes are the second, the Ayre is counted the first. The third Heaven visible is of all substances most perfect. The invisible Spirits, *viz.* Angels were created hecre. Angell signifieth a messenger, by nature hee is a spirit. Angells appeare sometime in dreames and visions, sometime in bodies apparant, and

What Philo-  
sophy is.

The actions  
of God two-

What Angels  
are.

How they ap-

peare.

What their  
officis.

and sometimes in true and reall bodies: their number is great; their office is to celebrate Gods glory, to watch over the world, to preserve us, to declare and do Gods will, to put good motions into our mindes, to resift ill spirits. The Devils were Angels cast from heaven for sin, into the lower parts of the World, and heereth they continue seeking to deface the Image of God in man and all creatures.

## CHAP. II.

### Of motions, qualities, colours, tasting, smelling &c.

Things visible contained in the world, are Substances, or Accidents. Accidents are either generall to all things, as motion, time, and place, for these belong to all: or proper to some things, as Qualities.

There be two kinde of Movers. 1 God. 2 Things created by him.

Things created move from God, and are of finite power in moving in a prefixed matter, and in time. They be of two kindes, without, or within the thing moved; the one called violent, the other naturall: Motion is an unperfect act, moving to that it was not, from that it was: Five things are in naturall motion, the mover, the thing moved, the terme from which, the terme to which it is moved, and time.

There bee sixe kindes of motion, generation, corruption, increase, decrease, alteration of quality, and change of place.

Qualities are either manifest, or secret: Manifest are either principall, or such as proceede from them: the

## Naturall Philosophie.

3

the chiefes of the principall, are heate and colde.

Heate gathereth together things of one kinde, and separateth things of contrary nature; as Gold from Silver or drosse. Colde joyneth together things, as the frost in winter.

The weaker qualities are moysture and driness. Moysture is hardly contained in his owne bounds. Driness keepeth his owne bounds.

Qualities common from the first are either seconds or wrought from them.

Second qualities from one or more, are deriued.

From Heate commeth Rarity, and Levity. For Lightnesse & thinnesse commeth of heate.

Raritas or Thinnes is that which hath hollow parts or spongie as a sponge, clouds &c.

Lightnes proceedeth from heate, drawing easily upward. Thicknes and heavines, are of colde. For cold gathereth together, and stoppeth bodyes, by which, bodyes become heavie.

Thicknes hath his parts shut up together as stones.

Heavines, moveth downewards: thus is Mercurie, heavier than gold, and gold than Lead.

Tastile or qualities that may bee touched: coming from moysture, are softnes: and tenuitie from the Ayre: smoothnes and slipperines from the water.

From drynesse proceede hardnes and roughnes, easines in breaking and drought.

From the first qualities diversly disposed, arise others called sensible qualities.

Their Originall is obscure or more manifested.

Qualities of obscure originall, are such as doe not always plainly & clearly declare the ground whence

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they

Two kinde  
of movers in  
the world.  
How created  
things move.

What motion  
is.  
Five things  
in motion.

Six kinds of  
motion.

What quali-  
ties are.

The use of  
Colours.

they arise. Of this nature are colours: which is the splendor of the body, illustrated by light, with which all bodies are dyed according to their moistnes, decocted more or lesse apt to receive greater, or smaller light. Colour, is either simple or mixed.

What a simple colour it is. A Simple colour consists of none other, as black and white.

White what it is. White consisteth of much light in a thin body, of an ayery moisture well concocted.

Black what it is. Blacke, is in a thicke body containning but small light, of moisture either adust or raw watriish mixed with the earth: as appeareth in the inner parts of the earth.

Mixt colours are from those two, mingled either in a meane or unequall portion, of equall mixture is red. Other are made of this meane, and one of the extremes. Yeallow is of much white and a little red, viz. two parts of white and one of red. Saffron culour or Orange-tawny, is of greater rednesse, and of lesser whitenesse.

Purple is of much red, and lesse blacke. Greene is of much black and lesse red: This being a cleare moisture is most pleasant to the eye.

Tastes whence it proceeds: diverse kinds of it. Qualities, of a more manifest originall are perceived in smels and tastes. Taste is made from the straining of drynesse through moisture, is either hot or cold, in a high or meaneit degree. Very hot tastes are biting, bitter, or salt.

Tastes meaneit hot or sweet: Cold tafts are either thicker or thinner, thicke as soure and sharpe: or thin as tartnes: where also we place freshnesse.

Smelling whence it proceeds: Smell, is a qualitie comming from a dry earthly heate,

heate, made thin by mixture of vapors. If it be well mingled, it is good: if not, it is stincking.

These qualities come from the first, there are others that come by Meanes from the first, such are, generating flesh by drinessse, and binding in, healing and joyning together, but more moderate. Hid qualities are onely knownen by long experiance, comming from the forme and escence of a thing, which in most things maketh it hard to discerne. Hid qualities are either inbred or passionate. Native or inbred, come from formes taking their originall from heaven, and therefore are governed, most according to the position of the heavens and stars, being of most efficacy in their subject matter rightly prepared, and at certaine times.

As the Load-stone in drawing Iron. The Pionie for falling sicknesse, Polypody in the diseases of the liver, &c.

Passionate qualities, are effected by an agreeing or disagreeing concord.

Concord is the naturall agreement of things, where by a feirce Bull tied to a fig-tree is made gentle.

An Olife taken up and replanted by a virgin, bringeth forth abundance of fruite.

Ocymum a Pulse, being at the sowing banned growth the better: The bleeding of a dead body at the presence of the killer. Discord in naturall things, whereby the horse-fly is killed with the smell of roses: so goats are poysonous unto plants.

## C H A P. III.

Of the Celestiall bodies, as the Heavens, the Firmament, the Starres, with their places, order and government.

**N**aturall things are simple or compact : Simple are stable or unconstant ; stable are the heaven and starres. Heaven is as it were a vaulted body made of water, thinne like a skinne, and moveable.

The Firmament is the orbe of the moveable heaven : containing the world, which consisteth of Ethereall and elementall parts.

The Ethereall part compasseth the Elementall: and is not variable : it containeth 10. spheres, and is in continuall motion being moved from the East, to the West in 24. houres, and maketh the naturall day. A star is a firme essence, in heaven, giving light. One star is brighter than another, and they are of divers motion, either simple, as from west to the east, or divers, as their variable motion, north and south : and they have their operation over inferiour bodies, which they worke by themselves, or by aspect with others ; which is either conjunct, or opposite : conjunct, is either in the same or severall places :  $\odot$ .  $\odot$ .  $\square$ .  $\Delta$ . characters bee of conjunction  $\odot$ . Sextile  $*$ , Trine  $\Delta$ : quadrat  $\square$ : opposition  $\wp$ , aspects. Their Poeticke rising or falling is either true or apparant, the true is Aeronicke, which is of such starres as rise and set about the sunne setting : Cosmicke ascend with the  $\odot$  and set with the sun rising. Those starres which rise Cœsmically fal Aeronically. Apparent rising is called Helical which is of stars getting out of the sun beames, & so if the star get into the  $\odot$  beames at setting : or when any star setteth

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What heaven  
is.What the fir-  
mant is.What the E-  
thereall part  
of it is.What a Starre  
is.  
The diverse  
kinds of them.Their opera-  
tion over bo-  
dies, & how  
it is.Their rising  
and falling, &  
how it is.

with the sun. Starres are either fixed or wandering, Stars fixed or  
wandering. fixed are the starres of the firmament, whose motion is not sensible; For in 72. yeares they move scarce a degree : keeping still one like distance. Stars are knowne from Planets How knowne  
from Planets frō planets, by their twinkling. The stars are far bigger in compasse than the earth, and they are of sixfoold order, first bigger than the earth, 107. fold, second 87. third 72. forth 54. fift 31. sixt 18. times. These stars are more or lesse glistering: the most glistering are disposed into 48. Images and are devided into three parts the zodiack & both sides thereof. The zodiack containeth 12. signes,  $\text{V.}\odot.\text{II.}\wp.\text{I.}\wp.\text{II.}\wp.\text{III.}$  of the East are  $\text{V.}\wp.\text{I.}$  fiery signes. North  $\odot$  m. $\wp$ . watery,  $\text{II.}\wp.\text{III.}$  Ayery of the West:  $\text{V.}\wp.\text{VI.}$  earthy Southern signes. Stars Masculine & Feminine.

*Aries* the Ram is the first signe of the Zodiacke consisting of 13. starres, representing the image of a Ram, it hath 2. starres in his horne of the 3. bignes and 3. in his taile, and one in the tippe of his right foote of the 4. bignes.

*Taurus* the Bull consisteth of 32. starres, 5. of these in his forehead are called *Hyades*, causing raine, the greatest is called the Bulls eye, being somewhat pale. 7. starres in his shoulder are little and called *Vergiliae*, and *Pleides*, because they shew the time of navigation by their rising in the Spring and setting in the Autum.

*Gemini* the twins of 18. starres ; in each head, is a bright star, called *Castor* and *Pollux*.

*Cancer* the Crab consisteth of 9. starres somewhat obscure.

*Leo* the Lyon is a bright signe of 27. starres, one in his heart

heart and one in his tayle, are of the first bignes, neare his tayle are 7. starres called *Berenices* haire.

*Virgo* the maide with wings of 26. starres, one in her left hand is called *Spica*.

*Libra* the ballance is expressed with 8. starres.

*Scorpion* hath 21. starres, of which but 14. are notable.

*Sagittarius* the Archer consisteth of 31. starres.

*Capricornus* the Goat, hath 18. starres, of which 12. are most conspicuous.

*Aquarius* the water-bearer, of 24. starres, like a man pouring water fourth of his pitcher, the starre in the extreame of the water is of the first bignes. totall. 364.

*Pisces*, the fishes consist of 34. starres.

The other starres that are not in the Zodiack are either northerne or southerne starres.

The Northerne Constellations are *Cygnus*, the little Beare hath 7. Starres. Helice the greater Beare hath 27 starres, of which 12. are more visibl. *Draco* the Snake 31. *Bootes* the Heardman 22. betwixt whose legs is *Arctur*. *Ariadnes* Crowne 8. *Hercules* 28. *Cepheus* 11. The Vultur or *Lira* 10. The Swan 17. *Cassiopeia* 13. *Perseus* 19. The Carter 13. he beareth upon his left shoulder the Goat, *Aesculapius* 24. The Serpent 18. starres. The Arrow 5. The Eagle 6. The Dolphin 10. *Pegasus* 20. The foale 4. *Andromeda* 23. starres. The Triangle hath 4 starres. The totall 360.

The Southern constellations are 25. The Whale hath 22. Starres.

*Orion* hath 38. *Eridanus* 34. The Hare 12. The great Dog 18. The Whelpe 2. The ship 45. *Hydra* 5.

The

The Crow 7. The Centaure 37. The Wolfe 19. The Aulter 17. The Crowne 13. The fish 12. Starres. The totall 316.

Plannets are Starres in the nearer part of Heaven, and are of diverse motions, and are therefore called wandring, which motions happen not according to the course of other Starres, because in the spheeres attributed to the severall plannets, they moving themselves circularly are stayed either in their highest or lowest Absis, or else are made to goe backward. Plannets are stayed when at their set bounds they stay their course and turne to some other part, and so seeme to stand still.

Absis or Aux, the highest place of the Plannets, to which being moved, they can ascend no higher, is called Apogæon, viz. farthest from the earth.

Absis or Aux, the lowest contrary to the other, and nearest unto us, is called Perigæon.

Plannets are said to goe backe, when removing themselves, they goe not forward their course, but returne backe the way they came, in some part.

The vertues and force of Plannets, are as diverse as their motions be: stronger by the proper habitation of the house, or by conjunction: otherwise they be weake.

The proper houle of each Plannet is that signe of the Zodiacke, in which first at the creation they were placed after the opinion of Astronomers.

Thus farre in generall. Now some shine with one particular light, other with more. They that have the same shinning, are moved with equall or unequall course. Plannets of uneven course have a proper motion to themselves. I. 4. 3.

Their

What Planets  
net are.  
Why calld  
wandering.

When and  
how they are  
stayed.

When and  
how they goe  
backe.

The vertues  
and force of  
Plannets.

The proper  
house of a h.  
Plannets.

of one ligh.  
some more.

Coniunction  
of Planets,  
common or  
speciall.

They preface  
things to come

And how.

Their coniunction is common or speciall. Common are of these three together, and it is called the greatest coniunction: this through his slow motion foretelleth wonders, as Astrologers say, though their grounds are uncertaine, yet wee will set downe what they say, not all as truths, yet some may bee probable. (Especially the sunne regarding) destruction to kingdomes &c. If such coniunction, bee in a fiery signe it prefacegeth great drought. In a watry signe it argueth raine, in Aery mighty tempestes. In earthy extreame cold. In Masculine death of men, In feminine death of women. Speciall coniunction is either meane or extreame. Meane of Saturne and Mars betokenes warres, contention, strife of Kings and Princes, and to these prosperous successours, if the dominant be good in coniunction.

The extreame coniunction of Planets, is great or lesse, greater of h. y. betokening new fests, and other like. If y. be all stronger, shall be for the best, if h. be stronger, then followeth losse, tribulation and great discord, say the Astrologers.

¶. Saturne is a star of a leaden colour, finishing his course in thirty yeares, hee is a Planet masculine, of cold and dry nature, therefore melancholike, bad & not fortunate, whose proper house is in ♑. governing melancholike persons, and diseases of that humor, and those of a rough and congealed phlegme as Lepry and Morphew. But if hee governe in his proper house in due aspect and degree, most profitable experiments may bee made against these infirmities. His rule appeareth in conception of men, as in the first moneth, and in the eight moneth much more.

where-

Wherfore the child borne in this moneth, through the bad aspect, and coldnes of Saturne, can scarce live long: hee ruleth also the lives of men, especially in their end, when old men bee cold and full of fleame, as say Astrologers.

¶ Jupiter is a bright Planet, which runneth his course in 12. yeares, his light is so great, that it causeth a shadow, being neere the earth, of which he is called Phaeton: He is hot and moist of nature, good, masculine, and his house is in ♈ and ♉ he ruleth over the sanguine, yong men and meane sports, and over disteases springing of bloud not adust: and rightly disposed. In his house, remedies are best applied for cure of such infirmities. Vnder his power is the child in the second, but more in the ninth moneth, and the childe that is borne is long of life.

δ Mars, is the 3 wandring star, in colour red or fiery shining, his course is 2. yeares, is a masculine exceeding hot, schorching and dry nature, after a sort malignant and infortunate: His house is ♉ and ♊ hee sheweth his force most upon Cholerike persons, and upon motions of youth, stirring to sedition and warre: if hee be well disposed in his house in fit aspect and degree, there may bee remedies used for the Frenzie, argues and other hot sicknesses. He governeth the 3. moneth of conception, and from 40. to 50. of mans age.

Now of starrs, that finish their course in like space of time 0.3.3. in a yeare space 0. The Sunne is the brightest of all wandring starres, appointing seasons, nourishing life, being the fountaine of light, of heate and all vitall powers, hee is hot and meaneley dry, his

D

house

A description  
of Jupiter.  
His proper-  
ties.

How he ru-  
leth in the bo-  
dy and over  
whom.

A description  
of Mars.

His proper-  
ties.

How he go-  
vers mans  
body and in  
whom.

A description  
of the sunne.

The office and  
use of it.

How and  
whom it go-  
vers.

house is  $\textcircled{1}$ . he ruleth hot and dry affections, and therefore in his rule is fit remedy for such.

In mans conception hee ruleth the 4. moneth, and governeth from 22. till 41. yeares of age.  $\textcircled{2}$  by being nearest or farthest from the earth, maketh Solsticium, which is our Summer and Winter: summer is  $\textcircled{3}$ , being in  $\textcircled{4}$  at the highest; winter solstice is  $\textcircled{5}$ , being  $\textcircled{6}$  farthest from us. The motion of  $\textcircled{6}$ , causeth like length of day and night.  $\textcircled{6}$ , in  $\textcircled{7}$  and  $\textcircled{8}$  the Sun in these pointes of heaven is equally moved in the 6. signes of our hemisphere, and also in the six opposit, although the points and times of both Equinoctialls vary and change.

$\textcircled{9}$  Venus is a very white star, she goeth neare  $\textcircled{10}$ , sometime before him, sometimes after him; in the morning going before him, she is called Lucifer, in the evening, following, she is called Vesperugo and Hesperus.  $\textcircled{9}$  is could and Ayery, and moist, her house is in  $\textcircled{11}$  and  $\textcircled{12}$ . She loveth youth, women, and wives, ruleth cold and moist diseases, happening most about the genitalls. Therefore  $\textcircled{9}$  in her house in due aspect is best remedy of such, she useth her power in the 5. moneth, and disposeth life, from 14. to 20. yeares and two, according to Astrologers.

$\textcircled{10}$  Mercury is the least wandering star, somewhat white, his nature is changeable, and full of turnings, hee is hote with the hote, cold with the cold, of the nature of him with whom he is joyned, his house is  $\textcircled{13}$  and  $\textcircled{14}$ , & is of force in merchandize, of which hee hath his name, and mathematickes are under his rule, he begins and followes studies, & reports rumors & newes. He guideth the 6 moneth, and from 4. to 14. yeares; if hee joyne with the higher Plannets, he denounceth wet and

Hemaketh  
winter and  
summer.

Length and  
shortnesse of  
dayes.

A description  
of Venus.

Her proper-  
ties: how and  
in whom she  
ruleth.

A description  
of Mercury.  
His nature:  
how and in  
whom he ruleth.

and flouds, which also hee doth meeting Venus in a wet house, in his proper house, windes &c.

$\textcircled{11}$  The Moone is the lowest wandering starre, finishing her course in 27. dayes 7. hours; although this starre have light of he owne, yet doth she borrow her shining from the Sunne. But because her essence or body, is not alike, but thicker in one place, than another, therfore she is not in all places enlightened alike from the Sunne. That part which is turned from the Sunne, is all of it shadowed and darkish, but that which looketh upon the  $\textcircled{10}$ . is full of light, and onely so much light as standeth towards us, seemeth to gaine or lose light, as it is farther off, or nearer the sun, where as indeed ever the one halfe is enlightened from the sunne.

The face seemeth to bee enlightened, as joyned with  $\textcircled{10}$ , or departing from him.

The  $\textcircled{11}$  joyned with the  $\textcircled{10}$  in the 4. first dayes is covered with greater light of the  $\textcircled{10}$  beames, and is called the new Moone, but departing from  $\textcircled{10}$  she appeareth still more enlightened, and it is either in part or whole.

In part before and after the 8 day, called the encrease and the waine of the Moone. In part lesse or more, the lesse is when she is horned, or halfe moone about the 4. day, being distant from  $\textcircled{10}$  2. signes: and after 8. in the 26. day, the halfe  $\textcircled{11}$  is seene about the 7. day and after 22. day when she is distant 3. signes or degrees from  $\textcircled{10}$ . The greater apparition of the Moone in part is, she being neare her roundnes, which is about the 11 day and after the 19. day distant from  $\textcircled{10}$  4 signes.

When and  
how the  
Moone is in  
the full,  
finish

The full apparition of  $\textcircled{11}$  is when in a right line she is opposed to  $\textcircled{10}$  at 14 dayes or full Moone. Although she

in what time  
he endeth her  
evolution.

What a  
Commet is.

finish her course in the foresaid time in the circle of the Zodiacke, yet is allowed to every Moone 29: and a halfe day, because she is to passe forward 2 dayes and 4 howres, before shee can overtake the ☽ which maketh 29 dayes, 12 houres. And in 9 yeares she endeth all her diversity of conjunctions and aspectes, and a new beginneth her former revolution, &c.

A Commet is a wandering star, of divers motions, shining in the region of the Plannets, this appeareth seldome, sometime above, and sometimes below the Plannets. It foretelleteth greevous accidents.

Others say that a Commet is a fat substance drawne by the heate of the Sun from the earth, and the heate of the highest region of the Ayre; is set on fire appering like a starre, and is sometime moved in the ayre.

It foreshewth war, Pestilence, drought, and barrennes of the earth.

The light of some Plannets sometime fayle, especially of ☽ and ☽. The defects happen in the Zodiacke, if these 2. starres bee in the knotts of their circles, or neare to them; which knotts are cuttings, made by the course of the ☽ and ☽, and is called the dragen. The higher is called Dragons head, the lower the Dragons tayle. The Ascendant or higher is where, ☽ departing from the middle Zodiacke, doth come nearest unto us.

The descendant, when the ☽ is removing from us. The Eclipse of those stars is in whole or part. In whole all being obscured, as in the midst of them.

In part it happeneth neare one of the knotts.

The Eclipse of ☽ is by comming of ☽ betweene our eyes and the ☽ in the conjunction of both Plannets.

A great Eclipse of ☽ is when the centure of these starres,

starres, proceed in a direct line to our eye.

The Eclipse of ☽ is the depriving her of the light of ☽ in the opposition, the earth shadowing her, comming in a straight line betweene them; her Eclipse is sooner scene in the East than in the West.

### CHAP. IIII. Of the four Elements.

Elements are simple essences, lesse durable than the <sup>What Ele-  
ments are.</sup> heavens, and are the wombs of mixed things &c.

Of the Elements 2. are cleare, ayre and water. Ayre, which is cold and moyst, and of these there are described 3. regions, the first is hot and dry, this is termed the fiery which causeth it to be called an Element Ayre the flame being but inflamed ayre: the middle region colder and darker; the third region, in which we live, is hot and cold, by the more or lesse reflection of the Sunne beames.

Ayre, is so needfull to creatures, that none live <sup>The necessity</sup> without it, the thinner the better, and more healthfull. <sup>of the Ayre.</sup>

Water, is an element lesse thin and cleare, moyst and <sup>What water</sup> most cold. Water warmed in channells in the earth <sup>is.</sup> causeth hot springs, this is heated by running by some <sup>The natures</sup> and uses of it hot mineralls, and helpeth moyst and cold bodies.

Water, is greater or lesse. The greatest is the Sea, <sup>Why the wa-  
ter in the sea  
is salt.</sup> which is salt, because that the starres drawe forth the thin substance leaving the earth behinde. The Ocean ebbeth and floweth after the ☽ motion, and from the new moone to the full, humours increase and after decrease, and the tides are knowne by the Moone. Particular Seas take their name of some country, or of some accident,

Of Mixed fiery meteors, as thunder, what it is, and the reason of it,

accident, as the red Sea, &c.

Of Flouds & Fountaines. Waters are in flouds or fountaines, fountaines are best which come out of Mountaines, or Rocks, &c.

Divers colours & tastes of waters. What the earth is. Water is of divers colours and tastes. Milky, Greene, Red, Salt, sharpe, bitter, and like wine.

The Earth is a thicke element, cold and dry, and is unmoveable, about which all things move, it is round and all things tend as neare the center as they can.

The compasse of it. It is in compasse with the water 21600.miles, and is but as a point to the whole world.

Of concreat & mixt bodies. Concreat and mixt bodyes or natures, are essences mixt of parts severally disposed. For from sundry things of divers formes, one forme may bee formed: and things of one mixture according to the divers affection of their elements are diversly affected.

As some are Ayery, some Fiery, and some Earthly. But the proportion maketh temperature, which is a proportion of qualities, cleaving together in mixture: it is equall or uneven, and is either simple or compound: simple is inact or power: compound, as heate with drinessse, &c.

Of mixed livelesse natures, as meteors, & what they be, with their several kinds, and the reason of them. Mixed natures are either livelesse or living. Livelesse Meteors which are a hot smoke lifted up by the attractive force of starres, some 15. German miles into the ayre and no higher: this smoke is a vapour or exhalation. A vapour is a moist smoke drawne from water, and is easily resolved into water. Exhalation is a dry smoke drawne from the earth, easie to fire: from exhalation arise fiery impressions which burne like fire, as pillers, dartes, candles, goates, shooting starres, fiery Dragons, darke streames, fooles fire, and such like fiery Meteors.

Mixed

Mixed fiery meteors whose exhalation is somewhat unpure thicker and long, her mixture is thunder which is a fiery exhalation, breaking forth of the cloudes, with a sound. Lightening small and great is a flaming light, of a burning exhalation, shining before thunder. Though we heare not the thunder, it is at the present breaking out of the flash, the eye being quicker than the eare. The great lightening is thicker and burneth more, if it be hardened with the heate of the Sunne, and it selfe, it maketh a stone which is cast out at the cracke, this doth much harme.

Lightening is thicke or thin, this boreth through without leaving any signe of it. The thicker scorcheth and burneth, it hath much earthy matter, setting on fier steeples and such like, and in great flashes is but some small deale of this earthy matter, else all things would be fired.

Watery meteors, are vapors more fully compact together, and appeare in the lowest part, or midist of the Ayre, as cloudes and such like. A cloude is a vapour joyned together by the extreme cold of the middle region. Cloudes hang in the Ayre by the Sunnes heat, which draweth them up, and by the moving of the windes are tossed up and downe.

In these Cloudes by  $\odot$  and  $\mathbb{C}$ , are framed divers shapes, having no proper matter, but onely appeare in the cloudes, either about  $\odot$  and  $\mathbb{C}$ , or opposite to them as:

Diverse shapes in the cloudes, with the reason of them: as a false Sunne, how occasioned. A halfe Sunne which is imprinted in the Cloud by the refelction of his beames, in a cloud being waterish, so that sometime the shape of 2. or 3. Sunnes are seene, so of the Moone. Bright circles of the cloudes, being blacke,

black, are from the reflecting beames, seeming to compasse the ☽ or ☽ yet they are far lower. These circles appeare more often about the moone : shee being not able with her beames to consume these vapours.

The shape in the cloudes opposed to the Sunne, is the raine-bow of divers colours, in a hollow, thin and in an unequall cloud, fashioned by reflection of the Suns beames, and the raine-bow is greater the nearer it commeth to the Horizon. If many raine-bowes be seene, the latter is made by the shining of the other, and are more obscure than the former.

The colours of the Raine-bow, be light, red, green; sky colour and yeallow : the raine-bow, is a foreteller of raine, it sheweth that many vapours are dissolved, which will shortly be raine. The hayle is like this, but it is always under the Sunne.

Meteors of dissolved cloudes, are either hardened, or moist, as raine, which is as it were a cloude melted and turned unto water ; if the cloude bee neare the earth the drops are great, if hic, the drops are smaller: The rayning of frogges, fish, milke, flesh, and such like, come of such matter being carried up, which doth againe fall with the raine, as wormes &c. are begotten of dead carcases in summer time.

Meteors made harde, after the cloud hath beene melted, are snow and Haile.

Snow is a cloude, prepared for raine before it fall, being congealed by cold, is by the motion of the windes dispersed into fleakes, and falleth onely in winter.

Hayle is rayne, made hard in the fall, the higher the fall, the rounder and lesser, because in the fall it melteth.

A raine-bow  
now occaſioned.

A description  
of the raine-  
bow and the  
signes of it.

Meteors of  
dissolved  
cloudes.

Reason of it.

now what  
is and how  
occasioned.

Hayle what  
is and how  
occasioned.

teth. It hayleth most in Autumnne and in the Spring, for then the sharpe ayre, hath most power over the drops, and in winter, the extreame cold maketh it snow being yet in the cloudes.

In the lowest region of the Ayre, are dew and frost. Dew what is, and how occasioned. Dew is a vapour thickned with some earthly matter, which in falling is presently turned into water.

Dew falleth onely in summer, for then the vapour is dissolved with the Sunne.

A fat kind of dew like melting hony, especially at the shining of Syrius, being gathered from leaves of trees, is Manna, called also wilde honey, or meldewes.

This Manna hardened by the heat of ☽ into Manna what it is. lumpes, is called Tereniabin.

Frost is a dewish vapour, made very hard by cold in Frost what it is, and how. winter before it be dissolved.

Meteors made of both kindes of smoake joyned together, are windes and such like. Of Meteors caused by both kinds of smoake, and the reason of them.

Windes is a subtile smoake, beaten downward by the cold in the middle of the ayre, and is moved side-lying on the earth : Auncients noted out 12. principall windes, all which in regard of matter are hot and dry, but differ for their situation of their qualities. Windes what it is, and the diverse kinds of it.

The windes being great, carried with force, darkens the Ayre, and is called a storme. If it doe roll about, it Whirlwinde. is a Whirl-winde, if it be but small, it is called Ayre.

An Earthquake is a fume, contained in the earth : Earthquakes. when it fadeth no vent, it shaketh it, & is made according to the breadth or depth of the earth. In breadth it causeth sometime such trembling, that it shaketh downe whole Citties. That in depth causeth a gaping or swelling. A Gaping is when the Earth openeth,

as it were her mouth, and doth swallow downe trees, walles &c. A Swelling is when the earth being lifted up like a mountaine, either remaineth so, or else falleth downe againe.

CHAP. V.  
Of mixed living Natures.

What a vegetative soule is.

The nature & office of it.

What nourishment is.

**N**atures mixed perfectly are living and corporall essences, indued with a Vegetative soule; A Vegetative soule is a facultie giving life to bodyes. Therefore so long as any part of this shallexercise her power in any body, so long is that alive, and remaineth safe. But her chiefe operation, and so life it selfe, consisteth either in preserving severall bodies or whole kinds. Nourishment is the preserving of severall bodyes, and is the making of foode received, like to the body nourished. Under that name is every thing which is received to sustaine our bodyes, of which sort is the ayre it selfe.

Some other faculties are required to perfection of nourishment, as concoction, and his companions: Concoction is a working or framing of nourishment, and is made either of temperate, or increased heate of the parts to be nourished.

By temperate heate is made ripening: which is a concoction of nourishment with moisture, by how much therefore the moisture shall be better tempered with heate, by so much is the ripening sooner, and more perfect, as in a summer too moist, the increase of the earth is later made ripe. Concoction arising from greater store of heate, is either elixation or assilation.

Elixation

Elixation is a concoction more perfectly working the thicke or watrish moysture, with a strong moist heate: As flesh is sod in water, whose moist heate altereth & consumeth the fomy moistnes of meat: if this Elixation remaine unperfect, it is called rawnesse, and the nourishment is not refined, for want of moist heate: For it was not of power to finish concoction.

Assilation is concoction, by means of dryer heate fully strengthening the moysture of nourishment. If this strength of bodyes be somewhat weake, it is called thickning; if concoction bee vicious, it is turned unto putrifaction. Moyst and hote things doe most easily corrupt, if the bodyes be not open to the Ayre.

In stopped bodyes, heate having no vent is increased. Whence commeth inflammation, which putrifaction doth follow, causing greater heate. This of concotion.

The Companions of concoction, are Faculties, fitly serving for the perfection of it.

Of these, one goeth before, the other followeth. The former is Attraction and Retention.

Attraction is a facultie, supplying matter of convenient nourishment, as is seene in things drawing out of the flesh Arrow-heads or thornes deeply fastned. So wheat draweth water out of on earthen pot, it being set upon the heape. Retention which retayneth nourishment, untill it be concocted, & doth nourish the body. Nourishment, is first put to and afterward united. The companion following concoction is expulsion.

Expulsion, is a driving backe of unprofitable matter: when concoction is once made, it is within or without

1. Attraction, what it is.

2. Retention, what it is.

3. Expulsion, what it is.

the body. Within, when the stronger thrust superfluities to the weaker, untill they come to the weakest of all. Encrease which is joyned to the nourishment, is continued but to a certaine age, & then the nourishing growing weake it ceaseth. Now followeth conservation of the whole stocke.

What generat  
ion is.

Generation is a facultie of the body, procreating any thing like it selfe. This faculty preserveth all kindes of things in their estate, though continually they doe perish.

What is the  
object of it.

The object of generation, is the procreating seede of every thing.

The changing faculty, altereth the seede into parts of the body to be begotten.

The ministeriall vertues of this facultie of generation, doe change or forme.

The forming faculty fashioneth the thing into distinct forme.

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### CHAP. V I. Of Minerals and Mettals.

The Vegetative soule being explained: now follow the kindes of such natures as have perfect, or unperfect growth. Those of unperfect growth are Mettals, which are decocted in the veines of the earth. Mettals are to be melted easily or hardly. Those that are easie to bee dissolved, are either first, or such as spring from them.

Principall, or first, are of themselves from the originall, as Brimstone, and Quicksilver.

Brimstone is the fat of the earth, with fiery heate decocted

Brimstone  
what it is,  
and the na-  
ture of it.

cocted unto his hardnesse, which is the cause that it so speedily is enflamed, and burneth even in water, yea sooner than the fat of the beasts, which though it bee fatter than brimstone, yet it is farre colder. So that for his fat drinessse, it helpeth scabbes of all kinds, and the leprie.

That Brimstone is counted the best, which is greene and cleare.

Quicksilver is a slimy water, mixt with a pure white earth, which metall for the matter whereof it doth consist, is thinne, cold, and heavie.

It is in continuall motion, and his thinnesse causeth <sup>The nature of</sup> that it pierceth mettals.

Mettals derived from the first, are more or lesse <sup>Gold what is</sup> pure; purer, are Gold and Silver. Gold is a metall <sup>is</sup> made of most subtile and pure red brimstone, and of the like quicksilver. Gold hath the most perfect mixture; as it is most thin, so it is most solide, whose substance is not corrupted, with either earth, water, or ayre, nor consumed with fire, but is more purged in it.

And for his thin solidnesse, it is most soft, and easie <sup>The nature of</sup> to be melted. So that is most worth, which is most red and glistering, and soft, that easily it may be wrought.

Experience teacheth, that the 3 part of one graine of gold can gild a wyre of 134 foote long: upon plates of silver, one ounce of gold will suffice to gild eight pound waight of silver. His nature is to bee marvelled at. It waxeth cold towards day light, so that those that weare rings of it, may perceive it, when it waxeth day.

It is found in the mountaines of Arabia and else <sup>Where it is</sup> found, where; and the best, in the mountaine Terrat, neare the Citie Corbachiam.

Silver, what it is. Siluer is a mettall begotten of pure white Mercury, and the like cleare white Brimstone. It differeth from Gold almost onely in colour, it being Gold not perfectly refined; yet in purenesse, firme solidnesse, and thinnesse, it is next to Gold, and one ounce of it may be drawne 3200. foote long, so that it can scarce be discerned from Gold. Yet it is thicker an hundredth fold.

When it is found, it hath the shape of haires, twigs, fishes, serpents, and such like.

Mettals lesse pure, consist of greater store of Brimstone or Quicksilver; of greater store of Brimstone, come Brasse, and Iron.

Brasse what it is. Brasse is a mettall, begotten of thicke red Brimstone, and Mercury somewhat impure; that coniming from Cyprus, is called Copper: the matter of Brasse is more burnt than that of other mettals, and indureth long, and is fit in any worke. For it is without all moisture, whether it be kept in earth or water. Minerals neare Brasse are Copperasse, &c.

Copperasse, what it is. Copperasse, is a minerall mixed of humours strained by dropes into small holes, and it shineth like glasse.

The nature of Iron. It is hot and dry in the 4. degree, vehemently binding, being of great force to season and preserve raw flesh. It also begetteth found flesh in festered sores, and stancheth blood. It is of a greene, yellow, and a skye colour, the best hath in it white spots; his kinde are Romane vitrioll, and red vitrioll, or the fome of Copperasse.

Iron, what it is. Iron is of store of Mercury, and of thicke sulphur, impure and adust. It may be softened by quenching in juyce of beane shuls or mallowes. It being red hot and

and cooling of himselfe, becommeth pliable.

But if it be often quenched in cold water, it becommeth thereby, very hard and brittle.

Mettals of greater store of Mercury, are Lead and Tynne.

Lead is an unpure mettall, begot of much unpure, <sup>Lead, what</sup> thicke and drossie Mercury, and likewise of unpure Brimstone; his impurity causeth blacknesse, which by refining is made whiter. It increaseth in waight, if it lie in moist ground.

Yea it is thought to increase with raine. It is of a <sup>The nature of</sup> cold and binding nature, and therefore scarce wholesome for mans use.

Tynne is a mettall mixed of Mercury, white with <sup>Tynne, what</sup> out and red within, and of Brimstone not well mixed, <sup>it is.</sup> as it were Lead whited with silver.

Thus farre of mettals pliable.

Mettals lesse pliable are those which are not easily wrought, or melted, and are hard or brittle.

Those that bee altogether hard, are stones. These <sup>stones, where</sup> are engendred of a watry moisture, and fat earth mix- <sup>of they are, &</sup> ed hard togeather. Of stones, some be rare, some com- <sup>the variety of</sup> mon. Of the rare and strange, some are of more esti- <sup>them.</sup> mation than others.

The more esteemed are precious stones, which are <sup>Precious</sup> more beautifull and fine, in regard of their pure and <sup>stones.</sup> subtle matter: Of Gemmes some are of one coullour, some of sundry colours. More or lesse transparent be- either white, or of other colours.

White are Crystall or Adamant. Crystall is a <sup>Crystall,</sup> gem, bright through, begot of a most pure stony moy- <sup>it.</sup> flture, and is found in mines of Marble, &c. His qual- <sup>The nature of</sup> tie

tie is binding: therefore his oyle or powder is helpefull in Laxes, and increaseth milke in womens breasts.

Adamant.

The Adamant or Diamant is a gem cleare and most hard, it can scarce be broken (and thence it is named) unlesse steeped in the warme bloud of a Goat that hath drunke Wine or eaten Parsley.

Saphir.

Transparent Gemmes not white, as the Saphir, Sardonix, and Smaragde, have the same coullour in all their kindes.

The Saphir is a gem cleare through, of a skie coulour, growing in the East, and specially in India: Being drunke, it helpeth against the stinging of Serpents, poysone, &c. as some affirme.

The Smaragde is of a greene couller, making greene the ayre neare about it; the stone of Brytaine is the best. It preserveth the wearer from the falling sicknesse: eyght graines of his shewing drunke, expelleth poysone, &c. as some affirme.

The Sardonix is a cleare gem, representing in coulours the nayle of a mans hand: it preserveth chastnes, and healeth vlcers about the nayles.

The Selenites is a transparent gem like glasse, it seemeth to increase and decrease with the moone: whose shape in the night it beareth, and is called therefore the Moone-stone, &c. It is of a white, blacke, and yellow couller. His scrapings heale the falling sicknesse. Bright shining Gems doe follow.

The Carbuncle is a gem shining in the light like fire: it is the noblest, and hath most vertues of any precious stone.

The Calcedonian is of a purple couller, shining like a starre, it expels sadness and feare by purging and chearing

chearing the spirits. It hindreth all visions.

The Astarites is a Crystalline stone, having in the middest like a full moone. Bright stones not shining do follow: or the lesse shining.

The Rubie is a red gemme, shining in darke like a spake of fire: it cleareth the sight, it expelleth sad and fearefull dreames.

The Topaz is of the colour of gold, casting beames in the Sunne: being layd to a wound, it stancheth blood: or cast into hot water, keepeth the hand from scalding.

The Hiacinth is of waterish colour, it is exceeding hard, and cloude in the darke, but pure and cleare by day. It is colde, moderating the spirits of the heart and of the other parts, and causing mirth, which being worne obtaineth favour.

Precious stones of lesse shining, be Corall, Asbestos, Magnes, and Galakte.

Corall is a stone growing in the Sea like a slimie shrub, which by the ayre presently is made hard. It is taken up full of mosse, but being unbarked, it appeareth cleare in his proper colour. The spongie Corall is white and colde. The solid is more stonie, and is red and blacke. Red and full of branches is the best, which worne of one shortly to be sicke, waxeth pale. His tender substance is affected by the bad vapour, which yet is unable in the body to afflict it. It is good for sore eyes, for the stone, and falling sickness.

Asbestos is of an Iron colour, being once fiered, it cannot be quenched: it is found in Arabia.

Magnes or Loadstone is of a skie colour, or an Iron colour: It draweth Iron. It hath like vertue with it.

with the Adamant. It purgeth the dropsie, helpeth the flux; respecteth the North and South pole.

**Galaſites.** **The nature of** Galaſites is of an Ash colour, it seemeth to sweat as it were milke, it increaseth milke, and helpeth running of the eyes, and ulcers.

Now follow ſtones of divers colours.

**Achates.** **The nature of** Achates is a ſtone of divers colours, reſembling a Lyonis ſkin: ſometime it is blacke with white veylers and yellow: ſometime it is as it were ſprinkled with bloud, it is very variable in colour. Eagles lay it in their nests to preſerve their young from poyſon.

**Turcois.** **The nature of** Turcois is darke, of a ſkie colour, and greeniſh: It helpeth weake eyes and ſpirits.

**Corneolus.** **The nature of** Corneolus is like water of washed flesh. It helpeth againſt the Pyles in the fundament, and to ſtop fluxes.

In a ring it reſtraineth anger.

**Chrysoprasus.** **The nature of** Chrysoprasus is of a greene colour with golden ſpots. It shineth a little in the darke, it is rare and deare.

It comforteth the heart, helpeth dim ſight, &c.

**Hematite.** **The nature of** Hematite is of an Iron colour with bloody veynes: It is cold and dry, cooleth hot waters, ſtancheth bloud, and helpeth againſt the ſcorching of the Sunne, as Authors write.

Also the qualities of other ſtones depend rather upon authoritie than upon proofe.

Stones be found in Beasts, Birds, and Fishes.

Stones found in Beasts be;

**Chelidonium.** **The nature of** Chelidonium is a ſmall ſtone in the belly of yong Swallowes. It is found in thoſe of the firſt hatching in the new moone: iſ two be found, the one is red, the other blacke. The beſt is of a ſprinkled red. The red in a linen cloath carried under the left arme, expelleth madneſſe,

madneſſe, the falling ſickneſſe, and getteth favour, ſay ſome.

2. **Alectoriuſ.** Alectoriuſ is of a chriftall or wattriſh colour. **The nature of** It is found in the Maw of an olde Capon: as big as a beane in one of nine yeere old, ſmall in one of five yeere olde. This ſtone quencheſt thirſt, being held in the mouth. It maketh warlike and couraſious.

3. **The Rubet or Toadſtone.** growtheth in the head Toadſtone. of a Toad: It is of a white browne colour, ſometime it hath a ſkie coloured eye in the middle: It is to bee **The nature of** taken before the Toad touch any Water. It is a reme- dike againſt all poyſon. If it come neare poyſon, it changeth colour, and sweateth as it were drops.

In fishes are found ſtones which are made of the cold hardening their matter.

4. **The Crabs eye.** of the female, is like an eye, **Crabſeye.** it diſſolveth bloud congealed, and expelleth **The nature of** ſtones **it.**

5. **Perch ſtone** found in his head, is white and as Perchſtone, big as Hemp ſeed.

6. **The Carpe ſtone** found in his chap, is triangu- **Carpeſtone.** ler, white without, yellow within. It helpeth againſt **The nature of** abouudance of choller. Thus farre of precious **it.** ſtones.

These following are of price because of their beau- tie, but not ſo rare.

Porphirite, is a Marble ſhining like purple. Alaba- **Porphirite.** ſter is a marble like in colour, to ſpotted Honny. **Alabaſter.** At this day it is cleare, and ſmooth, like Plaſter.

The Ophite is a moſt hard marble, of a ſad greene **Ophite.** ſpotted, and ſerpent-like colour.

Common ſtones are of unpure ſlimie earth, thicke, **Common** ſtones. and

and darke: some be solid, as the Flint, Boulder, the Whet-stone, &c. Some be full of pores as the Pumise, Gravel-stone, and free-stone.

Salt is a fryable metall, begotten of a waterish and earthy moysture, mixt and decocted together: It bindeth, scowreth, purgeth, disperseth, represseth, maketh thin and hard. It is gotten in pits or waters. The sorts of digged salts be:

Salt Ammoniack is found in plates under the hott lands of Cyreniæ. It is hot and dry in the fourth degree, and serveth to purge slimie humors. That which Apothecaries sell in blacke clods, is made of Camels stale, and because store of Camels be in Armenia, it is called Armeniack.

Salt Peter is found in dry places under the ground, and in hollow Rockes: It is sometime called Nitre, of a Region in Egypt. Of this kinde is the salt called Borax.

Salt Gem, is a white kinde of Even-salt, shinning like Crystall: It is also called Stonie, marbly, salt Sarmaticke, or Dacian.

Salt of Indie is blackish Salt, or ruddy. It is in clods cut out of mount Oremen.

Salt of Water is taken on the Sea coast, or from some lakes and springs, and it is sod and congealed of the Sunne, or by fire.

Allome is a salt sweat of the earth, it is either liquid or hard.

Liquid Allome is called Roch or Rock-Allome, with it is paper washed, &c.

Hard Allome, or Allome Scissile is thicke, and cleaveth: It is as it were gray.

Bitume

Bitume is a fat and tough moysture, like pitch, and <sup>Bitume</sup> is called Earthy pitch.

Liquid, is like an oylely moysture flowing, and is of <sup>Liquid Bitume</sup> divers colours, after the varietie of the place, of which Naphtha is a white fat of Bitumen, which enflamed by water, doth easily draw to it fire, through store of oyle that is in it.

Naphtha Petreolum is found in rockes. It is for his <sup>Naphtha Petreolum</sup> fatnesse of some called Oyle.

Ambar of Arabia is Bitume of an Ash colour.

Hard Bitume is tough, like foam swimming on the <sup>Ambar of Arabia</sup> water, but being taken forth, it waxeth hard: of this kinde is Asphaltus, which is blacke Bitume, hard like stone pitch: The best is gotten in the dead Sea of Iudea. &c.

Pissaphaltus Asphaltus, smelling of Pitch, mingled <sup>Pissaphaltus</sup> with Bitume: It is called Mummie. Where this wants, they sell us counterfeit of Syria; for poore men that die there, be stufed with Bitume, but the rich are dressed with Mirrh, Alloes, &c.

It also is found in clods rolling from mount Cervine into the Sea.

Succinum is Bitume, like a stone, exceeding hard, <sup>Succinum</sup> named, Ex succo, the Iuyce of the earth. It is white or yellow, which is called Ambar, or blacke as Jet. His fatnesse is so great that it burneth like a Candle, and smelleth like the Pine tree. It draweth to it chaffe, and such other light stufse, by a certaine hid nature.

Metallar Earths which are digged forth of mines.

Terra Lemnia, an exceeding red Earth of Lemnos <sup>Terra Lemnia</sup> Isle, digged in a red hill: It is sometime used for Armenian. In old time this had Dianaes scale upon it,

printed by her Priests, who were onely wont to wash this earth.

The nature of It is of force to expell poyon, it healeth wounds festred and old, and poysoned.

Bole Armeni- Bole Armenian, is earth of Armenia, it is of a pale red colour, smooth, and easie to break as chalke: It is a dryer, and profiteth against all fluxes.

Terra Samia. Terra Samia is white, stiffe, and tough, comming from the Ile Samos.

Ampelite. Ampelite is a pitchie earth, cleaving and blacke, it is named of annoynting Vines, to kill the wormes. This earth is like that we call Stone, or Sea coale.

Chalke. Chalke is white earth of Creete, and there is found of it in many other places.

Black Chalke. There is also some found that is blacke, which is called Pignitis.

## CHAP. VII. Of Natures perfectly living.

SO farre of Minerals; Now follow Natures perfectly living.

Natures perfectly living, are Plantes, or bodies endow'd with a soule. In all these bodies are sundry vertues, according to the temperature of the principall qualities. For the forme useth their qualities as Instruments: Whence come diverse distinct degrees of those qualities, as some are hot, cold, dry, moist, in the first, second, third, and fourth degree. The qualities in the first are obscure, and scarce to be perceived: in the second they are apparent and manifest: in the third they be vehement: and in the fourth immoderate, and not to be indured. And againe each of these hath a beginning, middle, and end.

Plants

Plants grow from a stalke or a trunke. Those from a stalke have but one stalke or many. Trees are Plants having but one stalke, full of Boughs, and rising on high from the earth. Some grow onely in hot Countries: others grow indifferently in all places: those that prosper best in hot Regions, are Frankincense, Mace, Pepper, Palme, Balsamic, Pomegranet, Lemon, Ceder;

The Frankincense tree groweth chiefly in Arabia; it is tall, and hath leaves like the Mastike tree, his gum <sup>tree.</sup> is soft, white, fat, and round, and is apt to perfume, <sup>The nature of</sup> it. and the stiffer and liker Rosen it is, so much the better. This perfume was used for sacrifice.

Myrrhe is a tree in India, of hard wood, wrythen Myrrhe. rewardes the earth, with a smooth barke, the leaves <sup>The nature of</sup> sharpe pointed towardes the end: his gum is fat, like it. Rosen, thicke, and shining red. The distilled liquor offresh Myrrh was once called Staet, but now it is named Storax. It is hot and dry in the second degree. It dryeth & closeth wounds, it expelleth the wormes: it is of force against an old cough and short winde. It is bitter: It is good to heale wounds of the head.

Mace is an Indian tree, grown in the Ile of Banda. It <sup>Mace.</sup> is almost like the Peach tree. it hath narrow and short leaves, whose fruit is the Nut-meg covered with Mace.

The Nut-meg hath an huske like a Filberd: the <sup>Nutmeg.</sup> fruit is covered with a rinde like our Wal-nut, which with ripenesse openeth and sheweth the Mace, which doth cover the Nut-meg, &c.

The new and best Nut-meg is full of juyce or oyle, smelling sweete. It dryeth and heateth in the ende of the second degree, with a kindly binding.

Pepper groweth in India. Of it be two sorts of trees, <sup>Pepper.</sup> and

and two sorts of fruits, one long, the other round. The round groweth on branches like vines, which imbraceth trees that stand by it; and his fruit is in clusters, first green, then being dried, it turneth blacke and rough: it is gathered in October.

The nature of it. Long Pepper groweth like the long bud on Nut-trees. It is hot and dry.

Palmetree. Palme tree groweth most in Egypt, and Arabia, alwayes green, with a long round bodie, his barke is like scales of a Fish, and the more it is pressed, the better it groweth: therefore was it used as a reward for the Conquerour.

Wilde Palme tree. The wild Palme in India, is called Thamarind, the Date is his fruit, it being ripe is blacke and sweete: Of these bee three kindes. Our Dates come from Egypt: they are hot temperately.

Balsame tree. Balsame is a low tree, his trunke is not much unlike the Turpentine tree; it hath leaves like Rew, but wither, never falling. It groweth in the valley of Hietico, and Egypt: being cut it sendeth out a milkish li-

The nature of it. quor: it is to bee cut in the uper part of the barke with glasse or bone, and not with Iron, least it die. His juyce is gathered with wooll into small hornes: of it is scarce got each yeare six Congies: a Congie is about three Pints.

Balme. Native Balme mixed with milke doth easily separate: and easily dissolve in water, neither doth it staine cloth. It is hot and dry in the second degree: it is of thin parts, and hard to come by. In his stead most commonly is used the Oyle of Nut-megges.

The

The Pomegranet }  
The Orange } doth follow.  
The Cedar tree. }

1. Pomegranet is a low tree, that hath narrow shining Pomegranet leaves, red flowers, and his fruit filled with graynes. It came from the Country in which Carthage stode; The nature of it. The juyce of this Apple helpeth the stomacke: It is very good in a burning Fever.

2. Pomecytron, Lemmon, and Orange trees, Pomecytron. are alwayes green, the leafe of the Cytron is like the Lawrell, endented. The fruit is rough, and al- The nature of it. wayes fruitfull; his juyce cureth inflammations, and other diseases in the skin: the barke comforteth the heart, &c.

The Orange hath a smoother skin, and leafe. Orange.

3. The Cedar is like to Iuniper, his leaves being Cedar. sharper: the tree is exceeding tall, chiefly of that of Cyprus; It never rotteth, his nature destroying sound things, preserveth corrupt things.

The trees leise hot are either fruitfull or barren. The fruitfull have fruit that have a rinde thicke, or thin. The thinner rinde is of Apples, or Berries. Apples are round, as the Fig, Olive, Plum, Cherry.

The Fig tree is not high, it hath a smooth barke like Figtree. the Walnut tree. It yeeldeth a long fruit like a Peare, full of graines. It is so fruitfull that it bringeth forth three or four times in a yeare: so that one Fig thrusteth off another. They are of two kindes, great and little.

The Olive: the Apple tree: and Peach be common.

The Quince tree is lower then an Apple tree, his Quince tree. fruit hath downie hayre; it is called Cidonia, of a ci-

The nature of tie in Crete, where first it grew. The fruit is cold and binding, and doth much profit hot stomackes.

The Peare, the Plum, the Medler, and the Cherry be common.

Now follow those trees that beare Berries.

**Lawrell tree.** The Lawrell is a tree growing in hotter countreyes, which incolde doth hardly prosper; it hath sharpe and thicke leaves ever greene, with a thin smooth barke: His leaves be hot and dry, his oyle for hot and softning nature helpeth diseases of the brest; and other sptinging of colde. The powder in wine causeth urine, breaketh the stone of the bladder and reynes.

**Juniper tree.** Juniper beareth a small fruit, the space of two yeares, and before the first bee ripe, it bringeth forth other. This tree hath short and sharpe leaves, and a straight backe, and slit almost in every place: the gum sweat-  
ing out of is, Vernix, called so because it congealeth in the spring. It is hot and dry in the third degree. It healeth and gleweth, and also heateth a colde stomacke. His berries are hot and dry in the first degree, comforting the spirits, and healing putrifactions. It consumeth rotten and moyst humors. The oyle hel-  
peth the Gout, if you annoynnt the backe-bone there-  
with: it cureth deafenesse, and eaten helpeth melan-  
choly, and stayeth the Rheume, and the Flux.

Now follow trees whose fruit hath a shell.

1. The Almond tree.

2. The Walnut tree.

3. The Chesnut tree taketh his name of a towne in Magnesia, the tree is much like the Walnut, yet the leafe hath more veines, and his edge like a Saw. His fruit is covered with a sharpe huske, and within it hath

a red huske. It is of two kindes: both hot and dry in the first degree; and for their earthie matter binding. They are hard to digest, and beget lice: but good if rosted and eaten with Salt, Pepper, and Sugar.

The powder of dry Chesnuts voydeth Vrine.

The Beech is tall with a thicke white bark, or a Beech tree. sad red. It hath leaves like Lawrell, nicked on the edge. His fruit is a theerangle Nut, closed in a little pricking huske. His fruite is hot, sweete, and binding. His leaves are coole, which being eaten, doe helpe much the griefe of the gums and lippes. If they bee stamped, they much strengthen dead members, being annoyncted with it. Swine and Mise delight much in this fruit.

Trees whose fruit is but halfe covered.

The Oke is a tall tree, having a thicke rough barke, Oke tree: his leaves are deepe gashed, and his boughes are knot-  
ted: his proper fruit is the Acorne: the gall and his giew are but accidentall. It is moderately hot and dry, The nature of it bindeth, and especially the little skin which cove-  
reth the Acorne. Distilled water of Oke leaves cureth Fluxes, and rottennesse of the Liver: and expelleth all congealed bloud. His leaves stamped and applyed to greene wounds heale them.

Likewise they draw heate from swellings and pim-  
pies arising by heate.

Galls grow especially in olde Okes, and in the night, in the Summer, the Sunne then leaving Gemini: they bee of two sorts; small and rough, and great and smooth.

Galls have in them sometime Spiders, Flies, and Ants: Some thinke Spiders doe presage pestilence,

Flies warre, and Ants dearth. The powder of Galls doth heale wounds without any scarre. Robur is very hard and duraunce: It hath lesse fruit.

The Ilex is very tall with leaves, Lawrell-like, ever greene, but lesser and sharpe: a thicke wood, and of a blacke red colour; and is very rare.

Another kinde is the Corktree, having like leafe, fruit, and greennesse, yet is it lesser, and hath a most thicke barke, which though it bee taken off, yet doth not the tree wither: it is called the female Ilex: his wood is full of pores and holes, and most light, and not to be sunke.

Now follow trees that beare gum, whose Nut hath scales.

The Pine apple is a Tree full of boughes, with hairy leaves like Combe teeth, of whose sharpe top it takes his name. His fruite is Pine-nuts, these are hot and dry, and binde. They are good against coughs, and consumptions, strengthening, and heating.

The wilde Pine is a great high tree with hairy leaves.

The Pitch tree is tall with a blacke barke, tough and stiffe, and running along his boughes like a crosse, from both sides of the trunke: his leaves are broader, softer, and smoother than Rosemary. From betweene the barke and wood of this tree floweth a gumme like Rozen.

The Firre tree is a kinde of Pitch tree, but somewhat whiter, his leaves on one side are of an Ash colour: from this floweth also a Rozen, which sod with honey profiteth against the distillations of the head and thoat, against the Quinsey and other maladies; it asswageth the inflammation of woundes, and joyneth them:

Firre tree.

Corktree.

The nature of it.

Pine Apple tree.

The nature of it.

Pitch tree.

Firre tree.

them: it sodden with Barley bran and wine, cureth hard kernells.

The Larix is a high tree with a thicke barke clifted <sup>Larix tree.</sup> on each side: his boughes grow by degrees about the trunke: his leaves are thicke, long, soft, and hairie; his fruit is almost like the Cypres, and hath a pleasant <sup>The nature of</sup> smell. The wood of this, for that it is dry and full of it, Rozen, burneth vehemently, and soone melteth mettall. His Rozen is in smell, taste, and working better than common Turpentine.

In colour it is like honey, tough but not hard. In the body of the tree groweth Fungus Agaricus, a swamp or mush. Rome. The best is white, thin, full of pores, light, and easie to breake: it purgeth fleame.

Now follow trees that bring forth no fruit of note, called Barren-trees.

The Elme is tall with rough leaves and sharpe: his <sup>Elme tree.</sup> wood is yellow, hard, & deformed: the barke, boughes, and leaves have a healing facultie in scabbes. <sup>The nature of</sup> It also it. closeth woundes.

The Alder hath a long straight trunke, his wood is <sup>Alder tree.</sup> soft, his leafe like Peare-tree, but greater, thicker, and rounder: it groweth in moist places, and by rivers. His wood is hot and dry, and indureth long under the <sup>The nature of</sup> earth, or in water. His thin and fat leaves layd upon <sup>it.</sup> tumors with hot water cure them, and helpe all swellings.

The Teile is a large and broad tree, with a thicke <sup>Teile tree.</sup> stalke: his leaves like Ivie, but softer and sharper. It <sup>The nature of</sup> bindeth: his other qualities are like the wilde Olive.

The Boxe hath little round leaves alwayes greene, <sup>Boxe tree.</sup> his stalke is rough, for most part full of knotts, and blacke:

blacke: the wood is hard and heavie, it sinketh in water, and never decayeth with age. Of this, boxes are named, because most of them were wont to be made of Boxe. It is dry and binding; the powder of his leaves, with Lavender and water, profitteth against madnesse. Lye of Boxe maketh yellow hayres.

The Birch is a tender tree, his barke is blacke at first, but after white; his wood is soft and weake above other. It hath a sweete sap; In the rude age, his barke was used for paper. His sap taken in the Spring helpeth the stone, Iaudies, and rottennesse of the mouth; also being put in milke, preserveth the Cheese made of that milke from Maggots.

Willow groweth apace, it endureth long, for though it bee hollow and rotten, yet it liveth. It is of two sorts, solid or brittle: the solid is blacke or yellow: the blacke is the greater and better, and is most apt for binding.

The yellow groweth chiefly neare water, it is sometime white. The brittle Willow is most white, and unapt for binding. Willowes are dry and thicke: his leaves and barke sod in Wine, helpeth gripings of the belly.

The Poplar delighteth in moist and watriish places. It is white or blacke: the white hath a long straight trunke, and a smooth barke: his leafe round, and after sharper, greene beneath, hoarie above, and do continually shake; it is moderately hot and dry. The roote taken in drinke, defendeth from gripings in the belly. Blacke Poplar is like the white, but greater, softer, and hath narrower leaves, and greene below, and of an Ash colour above. It is hot and dry: the boughes held

held in the hand (some say) forbid weariness of hand and foote: his gumme stamped helpeth loose-nesse.

Now follow shrubs, which spring up with many shrubs stalkes; and are noble or lesse noble: The noble, as first, Cinnamon, which is a barke of a shrub of that name growing in India: of a blacke colour, with thin boughes, which if they be broken, cast forth a sweete sent: His barke is of two sorts, thicke and thinne. The thinne is of the sharpest and best taste. The thicke is more slowly digested; it comforteth the heart: the best is red and sharpe with some sweetnesse. It is of subtile parts, hot in the third, and dry in the second degree. It helpeth a colde stomacke, it strengtheneth the sight, heart, and liver, and begetteth pure blood.

Cassia Fistula, is a round, great, and purple Cane, having a very blacke pith; the heaviest and reddest Canes are best. Of the blacke pith is made a good and gentle purgation, called Cassia extract. This helpeth much against feavers, and many other diseases, if one ounce of it be taken with as much Rose water.

Shrubs lesse noble.

The Hasell is an high shrub with a slender stalke, and full of white spots. His leaves are broader, and have more gashes than the Alder. The tree beareth the Filberd, and the Nut: these Nuts are hot and moist, and make fat, but hurt the stomacke, and procureth a laske. If stamped in water and sugar, they bee applied, they helpe an old cough. The ashes burnt with Swines or Boares grease, and applyed to the head, causeth the hayre to grow.

The Elderne hath boughes of an Ash colour, and in

in it is store of pith, and his leaves are much like to those of the Wal-nut tree, it beareth purple berries, having red iuyce.

Dwarfe Elderne is low & short, with a foure-square stalk; these plants are hot and dry, and have power to purge and digest: Also it healeth and clofeth; the roote or leaves of Elder sod in wine, purge the dropsie, and nothing is more effectuall to that purpose than the roote of Dwarfe Elderne. Water in which the leaves of Elderne are sod, helps to rid the dry cough. The Pitch or an electuary of the berries, expelleth iweate, and all poyon.

Barberries. Barberries are not much unlike the wilde Peare, although they bee farre lesse, and in the boughes some

The nature of two or three prickes grow together. His leafe is like Quince leaves, but narrower. Barberries bee hot and dry in the second degree. The iuyce of the berries profitteth against inflammation of the Liver, as also against inward impostumes: if it be applyed with night-shade, it quencheth thirst. The barke of his roote or fruit stamped, plucketh out a thing fast in the flesh: his syrrope tempered with sugar comforteth the hart, restoreth appetite, profiteth against burning Feavers, and all inward diseases of much blood.

Small Raisin. The small Raisin hath purple boughes, and pamine of pin leaves, but lesse, and of blackish greene: it hath round red berries, upon long stalkes; his fruit and leaves are colde and dry in the second degree, having power to close. The iuyce of the fruit taken, helpeth against trembling of the heart, & inflammations of the bodie; but chiefly it helpeth the plague: his iuyce with Endive water profiteth to remove specks of the face.

The

The Rose groweth up with small twigs, of a blacke Rose, greene, full of crooked prickes; his leaves are dented on the edge; his fruit, namely, Roses bee of diverse The nature of colours. All Roses bee colde and dry, and helpe both inward and outward affections of the body.

The juyce sod in Wine helpeth grieses of the head, eyes, and gums. Honey and Rose water strengthen all parts, and purge melancholy and fleame; sodden with Fennell and Salt, his oyle healeth burnings, and layed on the forehead taketh away heaviness, and hot sicknesses. The funges of wilde Rose trees in powder with wine expelleth the stone. Water of Roses helpeth sore eyes, comforteth and cooleth the braine, it being drunke, relieveth the heart and stomacke: it keepeth the spirits, and naturall heate.

The Bramble is full of prickes, and crawleth about: Bramble. the leaves of sweete bryer on the one side are white, on the other blacke; his fruite is the blacke berry, full of iuyce, the berry is dry, colde, and close. His fruit, The nature of leaves, or sprouts quench inward heate. The top of his leaves sod in Wine stay the bloudie flix, helpe ulcers of the mouth, and fasten loose teeth.

*Poterion, uvacrispa*, Gooseberries is full of boughs, Gooseberries. hath ash coloured barke or white, full of sharpe thornes, his leaves are lesse than ground Ivie and crooked, his berries from greene turneto reddish: it is cold The nature of in the first, dry in the second degree; his greene leaves cure inflammations, and apostumes, and asswage *ignis facer*.

Colutea in leafe not unlike to Fengreke, hath a Colutea. round fruit, as big as a Lentle in a puffed shell. It is hot in the beginning of the second degree, and dry in the The nature of it.

The nature of first: it purgeth the paunch: scoureth away chiefly melancholy, without trouble, from the head, braine, and the instruments of the sensles.

Thus farre of Plants growing from a trunke or stalke, &c.

Herbes.

Now follow Herbes which have but a thin small stalke, consisting most upon leaves: These doe nourish more or lesse, as Corne and Pot-herbes, which nourish more.

Wheate.

Wheate is a kinde of Corne, having an eare upon the blade, stuffed with many graynes; it is moderately hot and dry, and of much nourishment, and helpefull for many diseases, aswell within as without the body: the best is hard to breake, heavie, and of gold colour, smooth, and groweth in fat ground.

Barley.

Leaven of Wheate doth draw, ripen, and open ulcers, and apostumes: Bisket profiteth against rheume:

The nature of

Barly is cold and dry in the second degree, and purgeth. His floore and new milke in plaster cure Biles, and such tumors, by easing their paine, and drawing forth heate. Bread made of it begetteth cold and slimic humours, and nourisheth lesse than wheat, Barley water maketh the skin faire and smooth.

Spelte.

Spelte or Zea is of a middle temperature, betweene Wheate and Barly: it is a kinde of Wheate, and commonly goeth under that name.

Rye.

Rye is not so hot as Wheate, and hurteth much, except it be well digested.

Oates.

Oates are colder than Wheate, and of operation almost like Barley.

Millet.

Now follow of Pulse:  
Millet is a most fertile Pulse with sharpe leaves, broad

below

below, and sharpe towardes the toppe: his cod hath <sup>The nature of</sup> it a round long fruit. It is cold in the first, and dry in the third degree: It stoppeth the belly, and nourisheth but little.

Rize is smaller than Millet, and farre lesse, it groweth in moyst and watry places: it bindeth.

Lentells grow like small pease, and have a vertue to Lendles, blinde.

Pease are either of the field or garden; bearing a Pease, white, or a purple flower.

Beanes are meanely colde, and moyst, inflaming, <sup>Beanes.</sup> windie, hard to digest.

Now follow Pot-herbes.

Coleworts haue very broad leaves, which enclosing one another round about become Cabbedges. These be colde and moyst; and in Egypt be very bitter. The Romanes for the space of six hundred yeares used this onely herbe to cure all diseases. His broath expelleth the stome and gravell, his leaves applyed by themselves, or with the flowers cure inflamations: his juyce healeth festred sores, it cureth the falling of the haire. Broath made of his leaves with an olde Cocke, cureth the Collicke, and other gripings.

Spinagh hath an high stalke, and beareth sharpe Spinagh. seedes, his leaves being sharpe and triangular; it is colde and moyst in the first degree. His juyce expelleth <sup>The nature of</sup> hurtfull rheume: It mollifieth the belly, and cureth hardnesse of the backe and belly. His Iuyce taketh away the paine and heate of the stomacke and liver: it helpeth the byting of Spiders,

Lettise hath his leaves gathered into a curled round- <sup>Lettise,</sup> leffe; that which groweth in the field hath a shorter

stalke and leafe than Garden Lettise, being bitter, and full of milke.

The nature of. It is moderately moyst and colde, like Spring water, it is wholesome in Summer, to restore appetite to meate. Yet too much of it hurteth the eyes: and boyld with womans milke cureth burnings.

Beetes have two colours, the one white, the other blacke and red, both of them for their salt digest and cleaneſſe, but the white is more salt, and bindeth, yet being boyled, it loofeneth: It cureth obſtructions of the liver, especially if it be taken with vineger and muſtard: It also cureth thoſe that be ſick of the ſpinae.

Purſlaine hath round, thicke, fat, and white leaves on the backe, a red stalke, yellow flowers like a Starre: They of the Garden have broad leaves, and a thicke stalke: the wilde, leſſer, and more leaves. It is colde in the first, and moyſt in the ſecond degree: it is tart; his juyce helpeth a hot ſtomacke, and hot diseases; it being ſomewhat binding, helpeth fluxes, and evacuations of bloud, if it be uſed with Barly flower.

Garden Mallowes grow with a round leafe, and high stalke, his flowers be red, or white: wilde Mallowes are mollifie, and a little diſgest: Garden, are moyſt, and weaker. The decoction of Mallowes drunke, cureth an old cough: his leaves ſod and uſed with common oyle heale burning.

The Onion hath a ſubtile stalke, round and hollow, ariling from a round roote, wound about with many fouldings: it is hot almost in the fourth degree: it is of thicke partes: his juyce is a dry ſubſtance, and hot. An Onion all night layd in cold water and drunke, killeth wormes, and being beaten with ſalt, it draweth away

away werts by the rootes: his juyce put in the eare cureth deafeneſſe.

The Leekē groweth almost like Onions, and is of Leekē the ſame qualitie; it doth diſſolve ſwellings, and congealed bloud, being applyed like a Plaſter.

Parſley hath leaves like Cicuta, it is hot and dry in Parſley, the third degree, it peirceth and diſſolueth, provoking urine, the ſeede is more effectuall than the herbe. It diſſolveth the ſtone, it conſumeth ill moyſture, and ſores of the head.

These hearbes following are uſed for Garlands, or phylſicke; ſome of them ſwelling ſweetly.

The Violet hath leaves leſſer and thinner than I- Violet, but more blacke; his stalke commeth from the midst of his roote, beareth a purple flower, and a ſeed full of graynes. It ſpringeth in woods, and shadowie places, wilde, but not ſweete: it is cold in the first, and it. moyſt in the ſecond: and cooleth hot diseases and inſtillations. Of it there be diuers kindeſſe, and colours: as the Pancey or Harts-eaſe.

The Daife hath leaves ſomewhat round above and Bayſie. ſmall below, and the roote in the ground wheeling a- bout: it is cold in the ſecond degree.

The Ielly-flower hath ſharpe leaves, growing like Ielly-Flow graffe with flowers of ſundry colours: it hath an at- tractive force, and the juyce healeth wounds in the head.

Maioram hath almost a wooden stalke, with many Maioram: rough round leaves, and it ſmelleth ſweetly. It is hot The nature and dry in the fourth degree, it is of thin parts, and of a diſgesting facultie. It healeth, diſgestereth, and pro- uoketh vīne.

Rosemary. Rosemary is hot and dry in the third degree, and the nature of smelleth like Frankincense. It mollifieth, digesteth, and dryeth.

Spicknard is hot in the first, and dry in the second degree.

Lavender heateth and dryeth in the second degree.

White Daffodill is hot and dry. It is of diverse kindes.

Rose Campion is an hearbe with an Ash coloured stalk, as it were cotton, long leaved, and white, bearing purple flowers, growing up like the Prim-rose: his seede is hot and dry almost in the second degree: it prevaleth against the stinging of Scorpions.

Herbes used in medicine, are Aromatike, or ordinary. Aromatike doe comfort and strengthen the spirits. Thence they take their name.

Saffron is hot in the second, and dry in the first degree: it a little bindeth, and concocteth; it may with good keeping be preserved five yeares.

It comforteth the heart and stomacke, it maketh pure bloud, and provoketh vrine, it scowreth the brest, it is deadly, if it be taken too much.

Ginger waxeth greene twise or thrise in the yeare, the nature of it heateth in the third, and is moist in the first, it is of more subtile parts than Pepper.

Zadury or Wormalseede heateth and dryeth in the second degree, it is that we doe call the roote of China, like Ginger but not so biting.

Gallingall is the roote of a plant growing in Memphis and Syria, it groweth like the flouredelace, but with prickes, and is broader and thicker from the roote. It is hot and dry in the third degree, as is the roote of Cyprus.

Calamus

Calamus Aromaticus is an hearbe of India, growing like reeds or figs. It is hot and dry in the second degree, and a little binding.

Acorus is a plant growing with leaves like Iris, but smaller, or like segges; the roote is white, sweetly smelling. It is hot and dry in the second degree.

There be sexes of hearbes, as of other living things, some of which more helpe, namely, the Male or Female according to their kindes.

### CHAP. VIII. Of humane Creatures.

**M**AN is a creature that hath reason, & as he is most excellent, so hath he a more perfect shape in body than others. His members are formed, and beginne to appeare distinctly about the six and twentieth day. And they are all perfect in Males at thirty dayes, and in Females at 36. dayes. About this time the Childe beginneth to live, and to feele. The Male is moved in the third Month, but the Female in the fourth Month: then it is nourished and increased till the ninth Month, and after the ninth Month, when it is growne great, it is brought forth. This is the forming, and procreating of Man, for whose sake all other creatures were made.

A feeling soule is a power apprehending and perceiving things placed without the body of living creatures. This facultie is exercised by the sences, and by motion accompanying the sences. The sences are outward or inward. The outward onely perceiving things present: And every one of these have their

What man is  
and the man-  
ner of his ge-  
neration,

What a feel-  
ing soule is.

Sences out-  
ward.

their proper subiect : and the most have a middle instrument ; of all which, if there bee a certaine mutuall consent and just proportion : the fences become of more force : but if any one of them have too excellent an object, or his instrument bee corrupt, they are dull and unsit to be used ; This is the cause of blindnesse to those that walke in snow, and of deafenesse unto Smithes, &c. Furthermore, fences are common to the whole body, or proper to some part thereof. The fence in the whole body is touching. This is a fence by meanes of flesh, full of sinewes, apprehending tactill qualities.

His instrument is flesh, full of sinewes, or rather a nerve like a hayre dispersed throughout the whole body. In man for the abundance of nerves is this sense most quicke ; his meanes is flesh and skin, for though the skinne be removed, yet a man feeleth hurt. Sences of certaine parts are more or lesse noble. The nobler are Seeing, and Hearing ; whose meanes are the wa-ter, and ayre : Sight by the eye perceiveth bright and coloured things : The subiect thereof is light, &c. Greene a most temperate colour is most acceptable to the sight. His instrument is the nerve Opticke, which from the braine commeth to the eyes.

Hearing is a fence perceiving soundes ; his instrument is a little skin in the lowest winding, or turning of the ear, dry and full of holes : the skin is double, one below, which covereth a little bone like an Anvile : another above, containing a little bone, as it were a small Mallet. The upper striken by the soundes, striketh the lower, and stirreth up the spirits in the nerves to perceive the sound.

The more un-noble sences are Tasting, and Smel. Tasting: Tasting apprehendeth tastes. His instrument is a nerve stretched like a Net upon the flesh of the tong, which is full of little pores. His meanes is a temperate salt humour, which if it doe exceed the just quanttie, it doth not exactly perceive tastes: but if it be altogether consumed, no tastes are perceived.

Smelling judgeth qualities fit for smell: his instrument is the entrance into the first ventricle covered with a small skin; the dryer it is the quicker of smell, as in Dogs and Vultures: but man for the moystnesse of his braine, hath but a dull smeil.

Now follow the inward sences, which beside things presently offered, doe know formes of many absent things. By these the creature doth not onely perceive, but also understandeth that which hee doth perceive. These have their seate in the braine: They are either conceiving or preserving: Conceiving exerciseth his facultie by discerning, or more fully judging: it is called, Common sence, and the other is Phantasie. Common sence more fully distinguisheth sensible things; his instrument is the former ventricle of the braine, made by drynesse fit to receive. Phantasie is an inward sence more diligently examining the forms of things: This is the thought and judgement of creatures, his place is the middle part of the braine, being through drynesse apt to retaine.

The preserving sence is Memory, which according to the constitution of the braine is better or worse. It is weaker in a moyst braine than in the dry braine. His instrument is the hinder part of the braine.

Memorie calling backe images preserved in former time,

time, is called Remembrance: but this is not without the use of reason, and therefore is onely attributed to man.

The wittie excell in remembrance, the dull in memorie.

Sleepe is the resting of the feeling facultie: his cause is a cooling of the brayne by a pleasant abounding vapour, breathing forth of the stomacke, and ascending to the braine. When that vapour is concoct, and turned into spirits, the heate returneth, and the sences recovering their former function, cause waking. There be certaine appointed courses for watch and sleep, lest creatures languish with overmuch motion.

Affections of sleepe are Dreames, Night-mare, and Extasie, &c.

A dreame is an inward act of the minde, the bodie sleeping: and the quieter that sleepe is, the easier bee dreames: but if sleepe bee unquiet, then the minde is troubled.

Varietie of dreames is according to the divers constitution of the body.

The cleare and pleasant dreames are when the spirits of the braine, which the foule useth to imagine with, are most pure and thin, as towardes morning, when concoction is perfected.

But troublesome dreames are when the spirits be thicke and unpure. All naturall dreames are by images, either before proffered to memorie, or conceived by temperature alone, or by some influence from the starres, as some thinke.

From dreames many things may be collected, touching the constitution of the body.

Sleepe how  
caused.

Waking how  
caused.

Dreames.

What they be.

Their variety.

The

The Night-mare, is a seeming of being choked or strangled by one leaping upon him: feare following this compression, the voyce is taken away. This affection commeth when the vitall spirits in the braine are darkened by vapours, ascending from melancholy and phlegme, insomuch, that that facultie being oppressed, some heavie thing seemeth to bee layd upon us.

Therefore this disease is familiar to those, who through age or sexe are much inclined unto these humours.

An Extasie or traunce, is a vehement imagination A trance. of the departure (for a time) of the soule from the body. A deepe sleepe lasting some dayes enseweth, for What it is. the soule giving over it selfe to cogitation, ceaseth to serve the body. Wherefore men wanting motion and sence seeme to be dead. And with what humours the braine shall be compassed, such phansies dotli it conceive, although sometime spirits working on such phantasies, imprint other things.

Now followeth Motion, which accompanieth sence, and is caused either by appetite, or change of place; for we desiring things perccived in sence, cannot attaine unto them without moving our body to that thing.

Appetite is a facultie desiring such things as are Appetite. What it is. objects to our sence. It chiefly followeth touching, or thinking. Delight followeth touching. Delight is a desire of an agreeing Object. Griefe is his contrary, which is a turning from the hurtfull object, or from that we count unpleasant. Appetites following cogitation, are all the motions of the heart, which be called affections,

affections, and are either good or bad. The good cherish and preserve the nature of our sensitive facultie, as mirth, love, hope, which come of heat: when the heart dilating it selfe, desireth to enjoy the thing, with which it is delighted.

Motion what it is. Motion is a facultie of living creatures, stirring a bo-  
dy, entised by appetite from one place to another. It  
is either of the whole body, or of partes: Of the whole  
body, as by going, &c. Of partes, as breathing, which  
is made either by enlarging of the parts, which serve  
for the taking in of the ayre, or by the closing of them  
for the expelling of corrupt ayre.

Of the bodies of living creatures. Now followeth to intreat, Of the bodies of living creatures.

What the matter of the body is. The matter of the body in which the foresaid fa-  
culties be, is the seede of both sexes. Seede is most  
pure bloud, perfectly concocted in the testicles, and it  
is gathered from the whole bodie. For the testicles lac-  
king nourishment, draw bloud from the hollow veyne  
and change it.

Conception, what it is. Conception is the action of the wombe, by which  
the power is stirred up to execute his inbred gift.  
Then that power being stirred up doth diversly di-  
ftract the matter, separating his divers partes: and thus  
all parts alike get together their shape. Likewise all of  
them together are adorned with the faculties of the  
vegetative, or sensitive soule. Amongst the naturall  
faculties of the partes of the body, if there be putrifac-  
tion, a fault of the concocting facultie, there is made  
a certaine generation of matter: This is naturall, or  
extraordinary.

Naturall. Naturall is by an inbred heate, not altogether sub-  
dued,

dued, but slackly exercising force, through disposition  
of the mattter. Such is to be seene in inflammations, bot-  
ches, and impostumes. For in these, nature so farre as  
it can, laboureth to bring this his subject matter to the  
best forme. Therefore such suppuration is wont to  
argue a certaine strength of nature, wherefore often  
with convenient helpes, it is carefully encreased. In  
this kinde, especially is praysed white, thicke, smooth,  
equall, and least smelling matter.

Extraordinary mattering is, when nature altogether Extraordin-  
subdued, the humors or parts themselves are made full  
of corrupt matter through store of rottennesse.

But nature, or the concocting facultie, is overcome  
either through proper weaknesse, or by corrupt mat-  
ter: this is observed in all rotten, malignant, and stink-  
ing botches, in which according to the diverse fashi-  
oning of abounding matter, are found diverse sorts of  
solid bodyes, as haires, and such other like.

Of partes of the body which appertaine to the Of the part  
making up of the whole body, some are containing, of the body.  
and some contained. The contained for their fluent  
nature are sustained by helpe of others: Such are hu-  
mours and spirits. Humors are moist partes begot of  
the first mixture of nourishment in the liver. These are  
in the seede of creatures, and are called the beginning  
of things endued with bloud. Any of these if they  
fayle of their proper nature, are not fit to be in the bo-  
die, but are become unnaturall.

Humours are of the first, & the second sort. The first <sup>Humours</sup> are hot or colde, and moist, and dry: Bloud is hot and <sup>Blood</sup> moist, and it is a thin, red, humour, and sweete. With  
this the other partes be chiefly nourished, amongst  
whom

whom this is the chiefe. The faults of this is in substance, as putrifaction, or mixture of vicious humors: or in qualitie, as too thicke or too thin; or is affected with some other badnesse. The humour that is hot and dry, is choller; this is a thinn, yellow, pale, and bitter humour. His use is to helpe the expelling facultie, and chiefly in the Guts. Gall besides nature, through aduision is yellow, like an egges yolke, in the stomacke it is like rustie brasse.

The colde and moist is phlegme, which is a tough, slimie, and whitish humour, and tastlesse. If this have a fuller concoction, it is turned into bloud. His use is to moisten the joyns. When it declineth from his proper nature, it is salt or tart, according to his mixture. The colde and dry humour is blacke choller. This is a thicke, blackish, tart, bitter humour. It serveth to strengthen the stomacke, that it may more easily retaine, and receive meate. When it declineth from his proper nature by immoderate burning, it hath divers kindes. Humors of the second sort are begotten of the first, being wrought with concoction they are like dew or giew. Dew is a humor contained in the hollownesse of the members, and joyned to their substance, like dew, with which they are nourished.

Giew is a humour immoderately congealed, and being firmly fastned to the members, beginneth to bee changed unto their substance, of which change it is called *Cambium*, and *carniformis*, like the flesh.

Now follow the spirits, which are a fluent part of the body, most thin, and begotten of the bloud of the heart. The spirits are the chiefe instrument, and as it were the Chariot of the soules faculties, for with most speedie,

speedie, and swift motion, it carrieth them over all the body.

Spirits having roote in the heart, be either absolute Vitall, or rude, and to be finished in other parts. Vitall spirits <sup>What they are.</sup> be absolute in the heart, and are of a firme nature, and from the heart by arteries are spred in the bodie, by whose communication all parts doe live.

Spirits to be perfected in other parts bee Animall, <sup>Animall.</sup> which from the heart be carried into the braine, and <sup>What they are.</sup> there made subtle by nerves, flowing unto all the other parts; and this is the Chariot of functions or faculties of all living Creatures.

Parts containing are more solid, which are sustained by themselves; all these either are as a stay or covering. The stay to other parts, is either bone, or gristle. Bone is the hardest and dryest part, and stay to all the bodie. Bones are knit together by ligaments, which are like hard and thicke thredes, being as bandes to the bones of the bodie.

Gristles are somewhat softer than the bones, and <sup>Gristles.</sup> sustaine all other partes. The covering of the other parts, is the skin, which is tender without bleed, and <sup>What they are.</sup> covereth the whole body. The membrane is a tender skin, covering some parts.

There is yet in these parts a common exrement of sweat. concoction, which is sweat, and is a moistnesse of the veynes, expelled by secret pores; of this is to be seene a diverse colour, according to the die of the moistnesse, or matter thereof: the usuall is watriish, through the white substance of the channels, through which it runneth. But if the pores be large and open, that without delay, and long change it may slide through them:

them: especially, if for some affection of minde or disease, it become thinner, then is it speedily expelled, and tainted with some other colour, &c. Therefore from the colour of fweate, the bodyes constitution may be knowne. Colde fweate is worse to be liked than hot, but either is bad if they be unequall.

Also the containing parts afore-named are animall, or vitall, and each of these are more, or lesse principall. Animall parts are, in which the animall parts are most exercised, as fence and motion together, or alone. The chiefe member of motion and fence, is the braine contained in the head; whose substance being hurt, it is in danger to lose both fence and motion.

Braine, what it is. The Braine is softer than the other parts, white, and covered with a double skinne closely. The skinne of the brayne is either called *Pia*, or *Dura mater*. The scalpe is a thicke bone, covering the whole head, and hath up on it a skin with hayres. The scalpe is distinguished with certaine seames in certaine parts, which are true or fayned, &c.

Excrements of the braine. The excrements of the braine are either thicke or thin: The thin are teares bursting from the braine by the angles of the eyes. The greater the flesh of those angles be, so much more plentifull be teares, chiefly if the complexion bee colde and moyft, as of women. Teares be caused by heate which openeth, or colde which presseth the flesh, and causeth teares.

The thicker excrements which are expelled from the brayne, eyther are by the eares or nose.

Of the eares. In the eares is a moyft excrement of the brayne, gathering and rotting in their hollownesse.

Of the nose. That of the nose is a thicker excrement than that of the

The Braine: which although it be like flegme, yet it is altogether of another nature. The pithe of the backe bone is neare to the nature of the braines excrement, save that it is harder and something hotter. The backe is bonie, round, and in his length hath twentie foure joynts. The Nerves are lesse principall parts of sence and motion, which if they be out of order, the parts in which these be, become unfit to move. Nerves or sinewes are thin parts, round, &c. white, much like to thicke thredds. Some are softer, some harder. The softer are of more use, of which are six paire, by two and two, from the braine arriving to other parts.

First, to the eyes. Secondly, To moove the eyes. Thirdly, to the tongue and taste. Fourthly, to the pallet and skin of the mouth. Fiftly, to the hearing. The fixt, to the mouth of the stomacke, by which sence and motion descend.

Hard Nerves have a duller facultie, and lesse serving to the senses, of which are thirtie paire, which by couples come from the marrow of the backe bone: by whose conduct the backe easily executeth his faculties.

### Of the parts to breath.

The principall parts of breathing are in the brest: being either Lightes or Heart; wherefore these being touched, breathing is immediately hurt, and such wounds be deadly. The Longes are a spongiouse and thin part, soft, and like foame of congealed bloud, declining something to the right side. Breath is brought unto the Lightes by a rough Artery, knit to the roote of the tongue. This Arterie is a long channell made of many gristle rings on a row, which endeth in the

Lights. If any thing fall into the hollowe eſſe of this, the breath is hindred, and there is danger to be choaked.

The heart,  
what it is.

The Heart is a fleshie part, ſolid, and well compaſſed, almoſt like a Pyramis: it hath two ventricles, the right and the left. The right by an arteriall veine communicateth bloud to the Lights. This veine is ſo called of a proper ſubſtance and office. From the left ventricle of the Heart arifeth Aorta the roote of all the Arteries. Theſe are hollowe veſſells in the Heart begotte: and are thicke, diſtributing ſpirits throughout the whole bodie.

Spittle, what  
it is.

The excrements of the principall parts of breathing be ſpittle and cough. Spittle is a windie foame caſt out of the breft, and his parts: If it be avoyded with noyſe, it is called coughing. Superfluitie of this matter is judged by the colour, for red ſpittle is of bloud, yellow of choler: white of flegme, and blacke of me- lanchooly.

Midriffe,  
what it is.

The leſſe principall parts of breathing, are the midriffe, and the mediaſtin. The midriffe is a thiane ſkin, like parchment, faſtened overthwart to the ſides, and includeth the parts of the breft. The mediaſtin is a double ſkinne in length, diuiding the breft into two ſides.

The vitall parts are thoſe which ſerve to the preſervation of the ſpirits of living creatures, and are ap- peynted to nouriſhment, or generation. The principall parts for the perfection of nouriſhment be the ſtomacke and the Liver.

Stomacke,  
what it is.

The ſtomacke is a part like parchment, ſticking to the throat, round, but long, and as it were, twiſted with

with many ſmall threeds, and it is the kitchin of nou- riſhment to be concocted.

The throat is a channell, full of nerves, carrying Throat, whi- meate from the mouth to the ſtomacke. The Fibres are as it were, very ſmall threeds, by benefit whereof the ſtomacke enjoyeth her facultie. These if they bee ſtraight and right, draw nouriſhment unto them: if crooked, they are oblique or tranſverſe: thoſe detaine nouriſhment received; theſe expell excrements.

The caſting forth of excrements by the upper parts Vomiting of the ſtomacke, is called vomit, which expelleth that which aboundeth in the ſtomacke: yet ſuch excrement is many times ſent backe from other parts into the ſto- macke. The Liver lyeth upon the ſtomacke on the The Liver, right ſide, enclosing it with his laps, and is a fleshy part of nouriſhment, red, like congealed bloud, placed next unto the Midriffe. In the Liver is made the ſecond concoction, namely, of nouriſhment in the belly, tur- ned into a red maſſe: from the Liver arifeth a hollow veine, the roote of all other veynes. These are hollow parts, round, and guide the bloud unto all the bodys; the ſubſtance of theſe is thinner by ſixe folde than the ſkin of the Arteries, whose ſubſtance ought to be thic- ker for the vehement motion of the ſpirits. That the office of the Liver may be made perfect by meaneſ of veynes, other particles are allotted thereunto: which receive the abounding humors, choller, &c. The Gall receiveth yellow choller, and the Milt blacke. The bladder of the Gall is a ſlimie part in the hollow part of the Liver, of the figure of a Peare: the Milt is a long part like a ſhoe-ſole, on the left ſide over againſt the Liver, but ſomewhat lower. Water from the Liver is received

received by the reines and bladder. The substance of the reines is thicke, and solid flesh; they sticke on both sides about the loynes, and have emulgent veynes arising from the hollow veine. From the trench of the veynes hang downeward white, narrow veynes, guiding water from the reines unto the bladder. The bladder is a slimie part, round, and containing urine in it. Urine is a whey separated from bloud in the reines, and more fully purged in the bladder. This in the bo-  
die of a temperate man, and sound, is of a meane sub-  
stance, and in quantitie answereth the drinke recei-  
ved: in the chollerike it is yellow, or red. His se-  
diment is white, smooth, and equall without bubbles,  
&c.

How to dif-  
fererne a sound  
body by it.

A sound body is knowne by voyding vrine, which in the morning is white, and after something red. For the one signifieth that it doth, and the other that it hath concocted. Vrine is of a meane substance be-  
twixt thin and thicke. Thin vrine argueth the weake-  
nesse of the body, and coldnesse predominant, and rawnesse of the parts of concoction. And this either remaineth the same or becometh troubled. That sheweth concoction is not yet begunne, and therefore raw, or This, that it is but new begunne. Thicke vrine like that of beasts, noteth excesse of matter or concoction. Vrine doth varie according to age or complexion, or according to dyet and affections of the minde. For the vrine of Infants for the most part is white and milkie, the vrine of boyes is thicker, and not so white, the vrine of young men is like golde, and of olde men white and thin.

Complexion: Touching complexions, the chollerick have Orange colour:

colour: Phlegmatike pale, and thicke: the Sanguine, red and meane. The melancholike, wan and thin.

Dyet changeth vrine, as Saffron or Cassia causeth O. Dyet range colour. Vrine of those that fast long is yellow, of those that eat too much, it is white.

The lesse principall parts of concoction, are the Guts, gutts and mesenterion. The gutts are long, round, hollow, and are knit to the lower part of the stomacke. These are thicke or thin. The thinner are the three uppermost, as *Duodenum*, *Jejunum*, and *Ileos*.

*Duodenum* is the uppermost gut, twelve fingers long. *Jejunum* beginneth where the *Duodenum* beginneth to turne unto rundells. *Ileos* is a thin gut, having lowrapped windings. The thicker guts of a thicker skin, are *Cæcum*, *Colon*, and *Rectum*. Their several kinds.

The blinde gut is thicke, large, and short, having but one mouth. The *Colon* hath many turnings. The right goeth straight to the *Tuell*: The excrement of the belly, if it be but softly compact, and made at the appointed time, and somewhat yellow, and not much smelling, argueth good concoction. If it be red, it argueth, that much colour floweth in the stomacke: if it be white, it sheweth crudite and want of choller.

Blew sheweth mortification, and cold of the inward parts. Too thicke or thin egestion, argueth bad concoction: if fattish, or slimie, it noteth a consumption. Above all, in these things it must bee observed, what meate hath lately beeene received.

The guts are wrapped about with the Mefenterion, How placed in the body, which is a skin in the end full of kernells, and woven with many thin veines, which meeting together, make a multiplying of *Vena portæ* in the hollow of the Liver.

Thus of the common parts of all creatures: their kindes follow.

All Creatures are reasonable, or unreasonable. They which want reason, are Beasts, who live on Land or in Water. Those which live on the earth, moove on the earth, or in the ayre. Beasts moving on the earth, are fourefooted, or creeping. Fourefooted Beasts, bring forth young shaped as themselves, or eggs. Those that bring forth living Creatures, some have solide feete, and some cloven feete. They have solide feete who want hornes, as Horses, Mules, and Asses, &c. The cloven footed Beastes, for the most part have hornes, as the Oxe, Goate, Hart, &c.

Land Beasts bringing forth eggs, are the Crocodiles, and some which have a shell.

Frogges, Listers, and some Serpents have foure feete.

Creatures creeping on the earth, are all kinde of Wormes, Ants, Earwigs: to whom may bee added, Spiders, Lice, Gnatts, and such other.

Fowles are hotter and dryer than Creatures living onely on the land, and all of them bring forth egges, and have but two feete. They have either whole feete, or clawes. Geese, Duckes, Swannes, have whole feete to rowe in the water.

Other Birds for the most part have clawes, as Doves, Swallowes, Hennes, Sparrowes, &c.

The insect of Fowles, are Wasps, Bees, Hornetts, Gnatts, Flies. These Creatures are they which live upon the earth: those that live in the water, are Fishes, or of that kinde, as the Sea-Horse, the Sea-Dog, &c. Fishes many of them are like to Creatures living on the

the earth in their parts: but they have not so much blood: therefore they are colder and moyster.

Fishes are soft, or hard: the soft have scales, or onely a skin.

Of the scalie be the Carpe, the Pearch. Of the sliue be Eeles.

The harder fishes have plates, as the Crabbe, the Lobster, &c. Or shells, as Oysters, Mussels, &c.

F J N J S.



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you and I  
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